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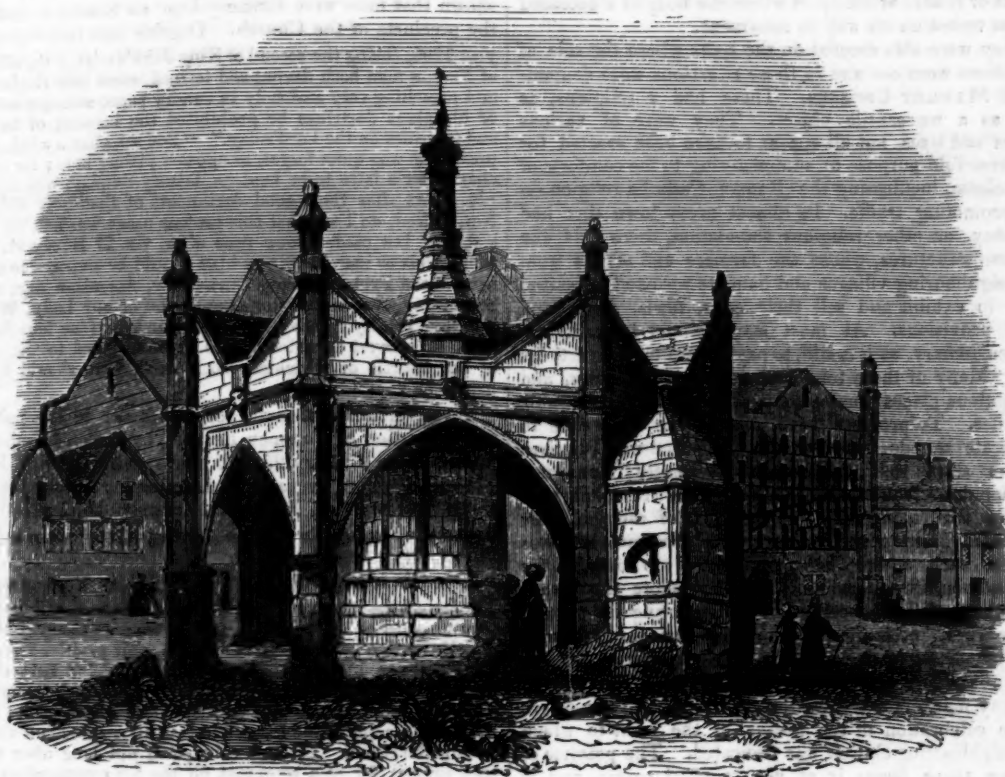
OCTOBER



14TH, 1843.

PRICE
ONE PENNY.

MARKET-CROSSES.



MALMESBURY MARKET-CROSS.

I.

THE practice of raising and fixing single stones as memorials of particular events, is of very remote antiquity. Thus, we read in the sacred history that Jacob erected such memorials on different occasions (Genesis xxviii. 18). Joshua also set up twelve stones to commemorate the passage of the Jordan (Joshua iv. 20-23.) Other examples of a similar kind are to be found in the Scriptures. But in the course of time these memorials of deliverance from danger, or of some other blessing conferred upon individuals or nations, became lamentably perverted from their proper object. The memory of the event, of which they stood as the sign, became lost or obscured, and the custom of paying idolatrous worship to blocks of wood and stone, superseded the true use of them. This species of idolatry was very common in Syria, Egypt, Greece, and their dependent colonies, as it is to this day among some uncivilized nations.

Descending to a later period we find that when the ministers of Christianity were zealously employed in diffusing their religion, and persuading men to embrace their new and benign doctrines, they did not at once demolish the stone sacred to idol worship, but endeavoured to appropriate it to the purposes of Christianity, and to render it an auxiliary in the spread of the Gospel, by inscribing it with a figure of the cross. But the worship of these stones or pagan idols survived long after the introduction of Christianity, and its existence

is to be traced in the British Isles through the fifth and sixth centuries, even into the seventh, as may be gathered from the prohibitions of several councils. Thus we find that on particular occasions it was customary to visit with lighted torches the spots where these stones were erected, to pay vows, to offer up gifts, and to pray for safety or success. "In Ireland," says Borlase, "some of these stones-erect have crosses cut on them, which are supposed to have been done by Christians out of compliance with the Druid prejudices, that when Druidism fell before the Gospel, the common people, who were not easily to be got off from their superstitious reverence for these stones, might pay a kind of justifiable adoration to them, when thus appropriated to the uses of Christian memorials, by the sign of the cross."

Thus when Christianity was yet in its infancy and Paganism had numerous avowed votaries, many rites and ceremonies peculiar to either would be often blended and confounded. Nor is it to be regarded with surprise that the symbol should be mistaken for that of which it was but the type, especially in a rude age, when the mind was but dimly informed of the means of salvation. In a document dated 25th November, 1499, concerning the church of St. Mary Magdalene, in Milk Street, London, it is stated that on a piece of "voide grounde" lying on the west side of that street, there "stode a crosse of the height of a man, or more;" and that "the same crosse was worshipped by the parisschers there, as crosses be comonly worshipped in other churchs yardes."

In the course of time crosses became greatly multiplied. Not only were they used as mementoes to new converts, and borne by the ministers of religion, in the same way that Augustine had a cross borne before him when he first came to preach Christianity to the Saxons; but they were set up by kings before a battle; they came into use as boundary marks for property, parishes, and sanctuaries; they were set up as sepulchral memorials of wealthy or distinguished persons; to mark places of public prayer or proclamation; to show the site of murders or fatal events; or the junction of three or four streets or roads; or the spots where the body of a deceased person rested on its way to interment.

They were also erected on the spots where the sale of provisions went on, and in those situations were denominated *MARKET-CROSSES*. These had a religious, as well as a mercantile object. They were of various shapes and sizes, but all appear to have been erected for the three-fold purpose of administering to the comforts of monachism, inculcating the Roman Catholic religion,—and promoting traffic. In almost every town that had an abbey, or other religious foundation, there was one of these structures, where the farmers and others from the neighbouring villages and hamlets resorted on stated days, to exhibit and sell their eggs, fowls, grain, and other provisions. At most markets and fairs, it was then customary, as it is still, to pay certain tolls on articles sold. Many of these tolls belonged to monasteries, and in populous places must have produced very considerable revenues. To promote these, and at the same time to propagate the doctrines of the Church, several ancient writers state that the monks frequently harangued the populace from these crosses. It is reasonable to suppose that, along with the doctrines of religion, they inculcated honesty and industry in the common business of life; such advice being calculated to benefit the husbandman himself, while it would promote the advantage of all parties concerned, by augmenting the tolls of the market, increasing the revenues of the monastic establishments, and rendering the necessities of life more abundant.

Many markets and fairs seem to have had their origin in the celebration of the festival of the saint to whom the neighbouring church was dedicated. The practice of holding these feasts is of very ancient origin, and is connected with the meetings called *wakes*, respecting the origin of which term Dugdale quotes from an old manuscript legend of St. John Baptist the following passage:

And ye shall understand and know how the evyns were first found in old time. In the beginning of holi chirche it was so that the pepull cam to the chirche with candellys brennyng and wold *wake*, and come with light toward night to the chirche in their devociouns; and aftir they fell to songs, daunces, harping, piping, and also to glotony and sinne, and so touned the holinesse to cursydes; wherefore holi faders ordeined the pepull to leve that waking, and to fast the evyn. But hit is called *Vigilia*, that is, *waking*, in English, and it is called the Evyn, for at Evyn they were wont to come to chirche.

For many ages these wakes were annually kept upon the saint's day to whose memory such dedication was made; but in process of time certain inconveniences being found in the observance of those days, especially such as happened during harvest time, when a little neglect may occasion much loss, many of them were by special authority from the bishop transferred to the next or some other Sunday following. This led to an injunction of King Henry, 1536, whereby, with the common consent of the prelates and clergy of his realm, in convocation lawfully assembled, he decreed that the feast of dedication of churches should in all places throughout this realm be thenceforth celebrated, and kept on the first Sunday of the month of October for ever, and upon none other day.

Since which time, (says Dugdale,) that rule hath been

observed in divers places, especially where the Saint's day unto whom the church was dedicated, hapneth in the winter time; but when it falls out in that time of the year that the weather is warm and proper for many meetings, it is generally seen that the said festivall is yearly kept on the Sunday next following such day, though not by commemoration of the Saint in any particular church service; but by holding up the custome of feasting amongst friends and good neighbours, with the exercise of dancing and other sports, which time is now usually called *THE WAKE* through most parts of this kingdom.

In a recent article on Ancient and Modern Fairs, it was shown that fairs were formerly kept on Sundays, and in the precincts of the Church. Dugdale says that "in the year 1200, (being the second of King John's reign,) the abbot of Flay, a man both devout and learned, came into England, and preaching very zealously in sundry parts, amongst other of his pious doctrines he prohibited the keeping of faires and mercates on the Lord's day." "You see, after a while his preaching was quite forgot, as appears plainly here; for this charter for a faire to be kept on Trinity Sunday, was about xiv. years after those good documents of that holy abbot. Nor, indeed, do I see that this profane usage was left, till by a statute law made a long time after, viz. 27 Henry vi. all such goods or merchandize which should be exposed to sale upon Good Friday, Corpus Christi day, Ascension day, All Saints day, the day of the Assumption of our Lady, Whit Sunday, Trinity Sunday, or other Sundays, (the four Sundays in harvest excepted,) were to be forfeited to the lord of the libertie or franchise, where such faire should happen to be kept."

By advertisement, partly for due order in the public administration of Common Prayers, by Queen Elizabeth, letters dated January 25th, in the seventh year of Her Majesty's reign, were issued, enjoining among other things "that in all Faires and common Markets falling uppon the Sunday, there be no shewing of any wares before the service be done."

Dugdale informs us that "Henry III. by express mandate forbad the keeping of Northampton fair in the Church or Church-yard of All Saints in that town; whereupon Rob. Grosthead, the good bishop of Lincoln, sent positive instructions through his whole diocese, prohibiting all fairs to be kept in such sacred places, pursuant to the king's example. This duty he recommended to his several archdeacons, and then sent a copy of the instructions to all rectors and vicars within the same. Yet this corruption did long after that time prevail, for in a comment on the ten commandments, by way of dialogue between *Dives* and *Pauper*, printed at London, 1493, we find a zealous complaint of this profane custom.

"*Dives*. What sayest thou of them that hold markets and feyrs in holy Church and in Sanctuary?

"*Pauper*. Both the byer, and the seller, and men of holy Church that maintain them, or suffer them when they might let (hinder) it, been accursed. They make God's house a den of theyeves, &c.

"*Dives*. And I dread me that full often by such feyrs Goddes house is made a tavern of gluttons, &c."

In the churchwarden's accounts of St. Lawrence Parish, Reading, A.D. 1499, is a "Receypt," as follows:

"Ir. Rec. at the Fayer for a
Standing in the Church-Porch iiijd."

Some idea may be formed of the extent and importance of these ecclesiastical markets or fairs when they were almost the only emporia of domestic commerce, by the information given by Warton in his *History of English Poetry*. In a note to the "Vision of Pierce Plowman," when the poet says,

To Wy and to Winchester I went to the faire,

the historian gives a number of curious and interesting details, a portion of which may be here selected.

The fair referred to at Winchester was held on St. Giles's hill, or down, near that city. It was instituted and given as a kind of revenue to the bishop of Winchester by William the Conqueror, who by his charter permitted it to continue for three days. But in consequence of new royal grants Henry the Third prolonged its continuance to sixteen days. Its jurisdiction extended seven miles

round, and comprehended even Southampton, then a capital trading town, and all merchants who sold wares within that circuit forfeited them to the bishop. Officers were placed at a considerable distance, at bridges and other avenues of access to the fair, to exact toll of all merchandize passing that way. In the mean time all shops in the city of Winchester were shut. In the fair was a court called "the Pavilion," at which the bishop's justiciaries and other officers assisted, with power to try causes of various sorts for seven miles round, nor, among other singular claims, could any lord of a manor hold a court-baron within the said circuit without license from the pavilion. During this time the bishop was empowered to take toll of every load or parcel of goods passing through the gates of the city. The bishop did not enjoy the whole benefit of these tolls, for the priory of St. Swithin, Hyde abbey, the hospital of St. Mary Magdalen, and other corporations, were entitled to certain portions of it. On St. Giles's eve, the mayor, bailiffs, and citizens of the city of Winchester, delivered the keys of the four city gates to the bishop's officers, who during the said sixteen days appointed a mayor and bailiff of their own to govern the city, and also a coroner to act within the said city. Tenants of the bishop, who held lands by doing service at the pavilion, attended the same with horses and armour, not only to do suit at the court there, but to be ready to assist the bishop's officers in the execution of writs and other services.

The many extraordinary privileges granted to the bishop on this occasion, greatly tended to obstruct trade. Still, however, this fair continued long to be in the highest repute of any throughout the kingdom; merchants resorted to it, not only from the most remote parts within land, but also from places beyond the sea. It appears that the justiciaries of the pavilion, and the treasurer of the bishop's palace of Wolvesey, received annually for a fee, according to ancient custom, four basins and ewers of those foreign merchants who sold brazen vessels in the fair. In the fair were formed several streets, devoted to the sale of different commodities, and called the *Drapery*, the *Pottery*, the *Spicery*, the *Stannary*, &c. Many monasteries in and about Winchester had shops, or houses, in these streets, used only at the fair, which they held under the bishop, and often let by lease for a term of years. One place in the fair was called *Speciarium Sancti Swythini*, or *The Spicery of St. Swithin's Monastery*.

In the revenue rolls of the ancient bishops of Winchester, this fair makes a grand and separate article of reception under the title *Feria: Computus Ferie Sancti Egidii*. But in the revenue roll of Bishop William of Waynflete, 1471, it appears to have greatly decayed, in which, among other proofs, Mr. Warton finds mention made of a district of the fair being unoccupied, namely, the stand appointed for those who brought certain articles for sale from Cornwall.

Edward the First sent a precept to the sheriff of Hampshire to restore to the bishop this fair, which his escheater Malcolm de Harlegh had seized into the king's hands, without command of the treasurer and barons of the exchequer. After the charter of Henry the Third, many kings by charter confirmed this fair, with all its privileges, to the bishops of Winchester. The last charter was of Henry the Eighth to Bishop Richard Fox and his successors, in the year 1511. But it was followed by the usual confirmation charter of Charles the Second. In the year 1144, when Brian Fitz-count, lord of Wallingford, in Berkshire, maintained Wallingford Castle, one of the strongest garrisons belonging to Maud the empress, and consequently sent out numerous parties for contributions and provisions, Henry de Blois, bishop of Winchester, enjoined him not to molest any passengers that were coming to his fair at Winchester, under pain of excommunication. In the reign of Richard the First, 1194, the king granted to Portsmouth a fair

lasting for fifteen days, with all the privileges of St. Giles's fair at Winchester. In the reign of Henry the Third, 1234, the fermier of the city of Winchester paid twenty pounds to Ailward, chamberlain of Winchester Castle, to buy a robe at this fair for the king's son, and divers silver implements for a chapel in the castle.

It appears from a curious record now remaining, containing "The Establishment and Expences of the household of Henry Percy, fifth earl of Northumberland, in the year 1512," and printed by Dr. Percy, that the stores of his lordship's house at Wresille for the whole year were laid in from fairs. "He that standes cherged with my lordes house for the houll yeir, if he may possible, shall be at all Faires where the groice emptions shall be boughte for the house for the houlle yeire, as wine, wax, beiffes, muttons, whete, and malte."

"This quotation (says Warton) is a proof, that fairs still continued to be the principal marts for purchasing necessities in large quantities, which are now supplied by frequent trading towns, and the mention of *beiffes* and *muttons*, which were salted oxen and sheep, shows that at so late a period they knew but little of breeding cattle. Their ignorance of so important an article of husbandry, is also an evidence that in the reign of Henry the Eighth the state of population was much lower among us than we may imagine."

In the statutes of St. Mary Ottery's college, in Devonshire, granted in 1338, the stewards and sacrist are ordered to purchase annually two hundred pounds of wax for the choir of the college, at this fair. In the accompts of the priories of Maxtoke, in Warwickshire, and of Bicester, in Oxfordshire, under the reign of Henry the Sixth, the monks appear to have laid in yearly stores of various, yet common, necessities, at the fair of Stourbridge in Cambridgeshire, at least one hundred miles distant from either monastery. "It may seem surprising, that their own neighbourhood, including the cities of Oxford and Coventry, could not supply them with commodities neither rare nor costly, which they thus fetched at a considerable expense of carriage."

At the head of the present article is a copy of the ancient market-cross at Malmesbury, in Wiltshire. Leland in his *Itinerary* notices this structure in the following terms: "There is a right fair and costely peace of worke in the market-place, made al of stone, and curiously voulded for poore market foulkes to stand dry, when rayne cummeth. There be 8 great pillars, and 8 open arches: and the work is 8 square. One great pillar in the middle beareth up the voulte. The men of the tounne made this peace of work *in hominum memoria*."

This account furnishes but little satisfactory information respecting the origin of this cross. By the shape of the arch, and the character of the sculpture, Mr. Britton supposes that it was built some time towards the latter end of the fifteenth century; perhaps in the reign of Henry VII.

Our cut will furnish an idea of this cross; its shape, pinnacles, flying buttresses, and richly-ornamented turret. The latter is octangular, having a small niche in each side, and contains eight sculptured figures in basso relievo.

MAN is a compound creature consisting of soul and body, and when he dies his dust returns to the earth as it was, and his spirit unto the God who gave it; and his *life*, which is but the condition of that mysterious union of matter with an immortal soul, is alone extinguished. No real existence perishes at the dissolution of our present state. The unseen principle of our being passes on through the valley of the shadow of death towards its destiny of good or ill; and the materials of its former tenement of clay *live* again under a thousand varied forms. The grass that grows more luxuriantly around the tomb, undoubtedly absorbs a portion of the crumbling remains that lie beneath its roots, and the cattle that browse upon the herbage convey to man again a portion of the material elements of some former individual of his race. The very worms that batten upon our decay after a few short days, put off their revolting form and spring upwards on insect wings as happy emblems of the future resurrection of the just.—Z.

AUTUMNAL TINTS.

But see the fading many-colour'd woods,
Shade deepening over shade, the country round
Embrown'd, a crowded umbrage, dusk, and dun,
Of every hue, from wan declining green
To sooty dark.—THOMSON.

No one can view without admiration, the varied and glowing colours with which trees and shrubs are adorned in Autumn. The eye of man is gratified by a mild and almost uniform tint during the period when the sun is brightest; but at the close of Summer the richest and most varied hues are imparted to the landscape, and the yearly exhibition of the phenomena of vegetation is thus terminated by a brilliant and beautiful display.

Many persons regard the autumnal colouring of the leaves of trees as the consequence of a diseased state of the foliage, which precedes its final decay; others ascribe it to an alteration or diminution in the nutritive juices, which prepares the way for the fall of the leaf by paralyzing the upper net-work. But although in general it is true that the fall of the leaves is preceded by their change of colour, yet there are many cases in which the leaves fall green; and this fact must be considered of some importance, because if the change of colour in autumn foliage were a token of disease, and a commencement of death, we should expect the token to be constant throughout vegetation; but if it be a consequence or continuance of the regular action of the same agents which preside over the other functions of the plant, and thus exhibit a sign of life rather than a token of death, it is to be expected that such variations should occur.

It is well known that it is at the end of Summer, or in the course of Autumn, that the change in the colour of leaves is produced. However varied their tints may be, they nevertheless, with few exceptions, come to shades of yellow or red, which are at this period the predominant colours of the landscape. This change is far from being sudden. In general the green colour in the leaf disappears gradually; many leaves, however, as those of the acacia and apricot, begin to grow yellow here and there and in spots. In others, as the pear tree, &c., spots of a beautiful green remain for a long time on the orange or yellow ground of the leaves. Some leaves, those of the sumach for instance, begin to change at their edges, and especially at the tip. The nerves, and the adjacent parts of the *parenchyma*, or pulp which connects the veins, seem to retain the green colour longest. It has been observed that leaves of the deepest green, assume the red colour, and those whose green is pale, the yellow or yellowish tint. Most of the leaves, however, which become red, pass through the yellow as an intermediate tint, as in the sumach.

Light exerts a great influence upon the autumnal change in the colour of leaves; for in those which naturally overlap each other in part, the uncovered portion is always more quickly and more deeply coloured than the rest. By entirely sheltering from the action of light either whole branches, or parts of leaves, it has been found that the change of colour is prevented. If an entire leaf is excluded from the light, it falls from the stem in the green state; if a portion of a leaf is shaded, the remaining part changes colour, while the shaded portion retains its original hue. If leaves, or portions of leaves, which are yellow before reddening, as those of the sumach, are placed in the dark, the leaves fall off yellow, or the covered part retains that colour, while the rest becomes red; thus proving the necessity of the action of light, in all the stages of colouring.

It is well-known that the green parts of plants absorb oxygen during the night, and exhale a certain proportion of that gas, when exposed to the action of the sun. It has been ascertained by a series of experiments that the leaves already coloured do not disengage oxygen gas by exposure to the sun's light: that when the leaves are either coloured in part, or at the point of changing

colour, even although they yet appear green to the eye, they from that moment cease to give out oxygen when exposed to the sun: that the leaves on arriving at the very point where the tendency to the autumnal colouring commences, continue to inspire oxygen gas during the night, and in a quantity always decreasing in proportion as the colouring advances: and hence it is to the fixation of the oxygen in the colouring matter of the leaf, that the change of tint is most probably owing.

The green substance of the leaves possesses peculiar properties, and appears to be the seat of the modifications which take place in the appearance of the foliage. It has often been proved that if a green leaf is left in an acid, it becomes yellow or red, and that if it then be placed in an alkali the green colour is restored. So, on the other hand, if the yellow leaf of a tree be allowed to remain for some time in potash, or any other alkali, it becomes of a beautiful green, without experiencing any other sensible alteration.

If the reddened leaves of the sumach, or of the pear-tree, are treated with boiling alcohol, the liquor becomes of a fine blood-red, and by evaporation deposits a resinous substance, which becomes of a fine green by the action of alkalis. An acid in this case restores the red colour. As the green is frequently seen to pass through the yellow hue before arriving at the red, we might naturally conclude that the latter is at a higher degree of oxygenation. Hence the autumnal change in the colour of the leaves may be owing to the successive fixation of new doses of oxygen, which continue to be absorbed without being exhaled. This addition would produce successive alterations in colour, without any great change in the other properties of the colouring matter of the leaves. This would explain the phenomena presented by certain leaves, as those of the *Arum bicolor*, which exhibit the three orders, red, yellow, and green, at once, or those of the *Tradescantia discolor*, which present a beautiful red colour at their under surface, while the upper is green.

Experiments on these and other plants were made by M. Macaire, and he found that as the colouring part of the leaves might with very slight modifications present the varied tints of green, yellow, red, and their mixtures, so, agreeably to the analogy which the observations of botanists have proved to exist between the various organs of plants, the same colouring principle that was found in the leaves might also be found in the flowers.

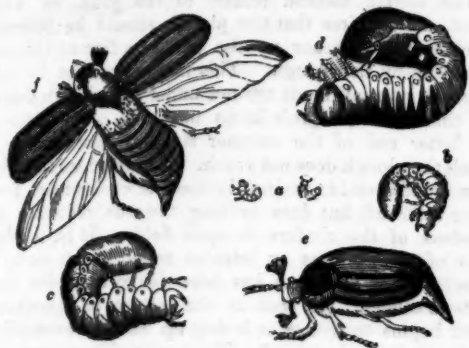
The red substance obtained from the coloured calyxes of *Salvia splendens* was rendered green by the alkalies, and became red a second time by the addition of an acid. Passing to the petals of the same flower, and the portion of the stem which supports the flowers, and which is red like them, the same product was obtained. The red principle obtained from the petals of red geranium, Bengal roses, asters, &c., followed the same rule; while from yellow flowers a yellow colouring matter was obtained, which was rendered green by alkalies.

White flowers appear to contain a slightly yellow substance, modified by some natural process. Reddish-blue flowers, such as those of the gillyflower, yield a tint at first rosy, then purplish, and leaving a residuum of a fine violet colour. The flowers of the blue sweet violet give also a substance of similar hue, which, like the others, is rendered green by alkalies, and red by acids; it is soluble in cold water, and might be kept in a state of powder, were it wished to preserve the colour of violets.

On a future occasion, when the season of blue skies, singing-birds, and wild-flowers returns, we shall again notice the subject of this interesting inquiry. For the present, we conclude with the following deductions from the facts mentioned above:—1st. All the coloured parts of vegetables contain a substance capable of changing colour by slight modifications. 2nd. It is to the fixation of oxygen, and to a sort of acidification of this colouring matter, that the autumnal change in the appearance of leaves is owing.

ON INSECTS WHICH ARE INJURIOUS
TO THE FARMER.

VIII.

THE COCK-CHAFER, (*Melolontha vulgaris*).

TOWARDS the close of summer we often meet with a sudden annoyance as we are pursuing our evening walk in the neighbourhood of plantations, or through some close-embowered shade. The "dronny flight" of the beetle, or common cock-chaffer, that forms so pleasant an accompaniment to the "drowsy tinklings of the distant folds," is by no means welcome when the insect, in its heavy flight, comes full swing into our faces, as is not unfrequently the case, owing apparently to an inability to change its course suddenly. This peculiarity in the insect has given rise to the term "as blind as a beetle," though it does not arise from any defect of vision.

The cock-chaffer is one of the farmer's enemies, and its devastations are often extensive, being carried on both while the insect is in the larva state, and also when it assumes the perfect form. This well-known insect is about an inch in length, the body oblong, and convex; the horny wing-covers are of a brown colour, while the back of the head, and the under parts of the body, are quite black. The female digs into the soil to some depth, in order to secure a safe place for her eggs. These are very numerous, and are laid in a cluster at the bottom of the hole, which is sometimes six inches deep. The larvæ which are produced from these eggs are dirty-looking grubs, of a yellowish white colour, and apparently quite blind. When full grown they are about an inch and a half in length, the head scaly and of a light brown colour, the body soft and whitish. These large and somewhat disgusting grubs are often turned up with the soil, and must be well-known to most cultivators. The head is furnished with powerful mandibles, and two antennæ, each having five joints. Six short scaly legs on the fore part of the body are the only instruments of motion, while the hinder part remains curved or partially rolled up. The size of these larvæ makes them a rich prize to the rook, and good service does the industrious bird render in lessening their numbers.

During three years does the grub we have just described continue its subterranean existence, unless disturbed and destroyed by some of its enemies. The summers of this period are occupied in attacks on the roots, chiefly of the grasses, but sometimes of shrubs and trees; during the winter it descends deeper into the earth, and remains wholly inactive, without requiring food. As the spring approaches it rises to within a few inches of the surface, and prepares to renew its attacks on the different roots. During the third autumn the larvæ descends to a greater depth than before, sometimes as much as five or six feet, and forms a case or cocoon in which to undergo its changes. It then assumes the chrysalis state, and in the following spring passes through its final change, and becomes a perfect insect.

The beetle is at first soft and light-coloured, but it gradually gains consistency, and by the month of May or June it is prepared to leave its subterranean dwelling, and become an inhabitant of this upper world. Working its way to the surface by means of the head and fore-legs, it spreads its wings, and disdaining any longer to grovel in the dust, takes its glad flight to the foliage of the nearest trees, among which it is to spend the brief season of its existence as a perfect insect. The males scarcely exist more than a week, but the life of the female is prolonged for the purpose of laying her eggs. The whole duration of the brood of cock-chafers in the winged state may be estimated at one month.

As the place chosen by the parent insect for the deposition of her eggs is generally some rich grass land, in the neighbourhood of oak plantations, so we often find the cock-chaffer abounding on such trees, or among the old ancestral groups, that stud the parks of country-dwellings. The mischief done to trees by these insects is in general trifling, but there have been cases where it proved far otherwise. Thus, although the ravages of the grub are the most to be apprehended during the long period of its working underground, yet we have instances of great devastation committed by the parent insect. One of the most remarkable is that recorded by Dr. Thomas Molyneux, in the 19th volume of the *Philosophical Transactions*, and of which we here give an abridged notice. The writer states that his narrative is not stated from common hearsay; but is given on "sure ground." This remark is necessary; since we are happily so unacquainted with the plague of beetles he describes, that we might be inclined to doubt the whole of his narrative, or to consider it grossly exaggerated.

The cock-chaffer is described as appearing suddenly on the south-western coast of Galway in 1688, and gradually spreading through other counties. Thousands were seen hanging on the trees in the day-time, and towards evening they rose, dispersed, and fled about with "a strange humming noise, much like the beating of drums at a distance," and in such vast numbers, as to darken the air. Travellers, or persons abroad in the fields were greatly annoyed by them; for numbers would fly with such force in their faces as to occasion pain, and to leave a slight mark. But this was a trifling inconvenience compared with that which soon resulted from their visit. They devoured the leaves of the trees, so as to produce a wintry appearance in the country, although it was the middle of summer; and the noise of their feeding is said to have been very surprising, "for the grinding of the leaves in the mouths of this vast multitude all together, made a sound very much resembling the sawing of timber."

Nor were the trees and hedges the only sufferers. They came also into the garden, destroying the leaves, buds, and blossoms of fruit trees, causing, in the more delicate species, the death of the tree. The beetles came also into the houses, crawling on the walls or ceiling. Sometimes they fell "on the meat, as it was dressing in the kitchen," sometimes "from the ceiling of the rooms into the dishes as they stood on the table," so extremely offensive and loathsome were they, as well as prejudicial and destructive.

The people of Galway were also dismayed to find that the "creeping spawn" (as Dr. Molyneux terms the larvæ) were even more destructive than their parents. These, lying under ground devoured the roots of the corn and grass, depriving both man and beast of support, and bringing the country into a desolate condition. Indeed, had it not been for the timely check given to the perfect insect by high wind, and wet weather, which destroyed them by thousands, the plague would have been still more violent, and disastrous in its results. During such weather they fell in vast numbers from the trees, and the swine and poultry were so "cunning" that they watched beneath the trees in such seasons, and ate them greedily, thriving well on this diet.

One of the methods employed at that time for the destruction of the animal was that of burning heath, fern, and other weeds in a corner of the garden or orchard which lay most convenient for the wind to disperse it among the trees. This was found an effectual remedy, preventing the incursions of the enemy, and driving out such as had already taken possession. Dr. Molyneux then says, that in the years following this remarkable one, the ravages of the insect prevailed to a less serious extent; but he adds: "This last year (1697,) they have reached as far as Shannon, and some of the scattered loose parties crossed the river, and got into the province of Leinster, but were met there by a stronger army of jackdaws, that did much execution among them, killing and devouring great numbers. The main body still keeps in Connaught, and took up their last quarters at a well-improved English plantation, not far from the river Shannon, called Earscourt, where they found plenty of provision, and did a great deal of mischief by stripping the hedges, gardens, and groves of beech quite naked of all their leaves. They begin to be apprehensive of them in Queen's County; and in order to defend themselves against their incursions, are resolved upon their first approach to fire the mountains between them and King's County, that abound much with heath, and by this means raising a smoke, they hope they may force them to turn their course another way, and so prevent their making an inroad into these parts."

This invasion of Ireland by the cock-chaffer was more formidable than any of which we have an account in this country, but on referring to past agricultural notices, we find that very serious mischief has also been effected in England by the same insect, especially in the county of Norfolk. A great many crops were totally destroyed in the year 1751. Mr. Anderson, of Norwich, mentions having seen a whole field of fine flourishing grass so undermined by these grubs, that in a few weeks it became as dry, brittle, and withered as hay. Bingley also states a case where a farmer and his servants near Norwich, gathered eighty bushels of cock-chafers; and the grubs had previously done him so much mischief, that the court of the city thought fit to allow him twenty-five pounds, (a considerable sum in those days) out of compassion to his loss. So early as the year 1574, we have accounts of its ravages, and in that year it is said that so great a number were driven into the river Severn, that they altogether hindered the mills from being worked, and were with difficulty destroyed by the united efforts of the people, and the different kind of hawks, ducks, and other birds that eagerly devoured them. It is stated that in Normandy these insects generally appear in considerable numbers every third year; and a few years ago the neighbourhood of Paris was much infested with them, so that the trees were nearly stripped of leaves by these voracious creatures.

Among English farmers this insect is chiefly dreaded in the larva state, on account of its ravages on meadow and grass land, which are often very considerable. It sometimes undermines the richest meadows, and so loosens the turf that "it will roll up as if cut with a turfing spade." On this account many agriculturists have sought to ascertain the means of destroying them at a small expense. Five different methods have been employed, but none have yet been found completely and generally successful. The first method is, to make flambeaux, of the thickness of one's fist, composed of a well-sulphured match, surrounded with pitch-rosin, and a slight external layer of yellow wax. When the cock-chafers begin to appear, and are reposing on the leaves of trees and hedges, which is usually from nine in the morning to four in the afternoon, the flambeau is lighted and waved about under and around the trees and hedges, in such a manner that the smoke, mixed with the odours of sulphur, resin, and yellow wax, suffocates the insects. After continuing this operation for about seven or eight minutes, the hedges are shaken with sticks, and the fruit trees with crooks or with the hand, taking care, however, not to suffer the flowers of these trees to fall.

The cock-chafers, half stupified by the heat of the sun, and suffocated by the smoke, undergo a sort of lethargy which lasts about an hour. In this state they easily fall from the trees and hedges, and can be collected together in a heap upon a small quantity of straw and burned.

The second method relates to the grub, or white worm, and requires that the plough should be followed by children to gather up the grubs as fast as they are turned up by the plough. This method cannot be fully effectual, since all lands are not under the plough during the time that the grub keeps near the surface, for at the latter end of the summer it penetrates to a depth which the plough does not reach. The third method has been found useful in saving the roots of choice trees from being attacked, but does nothing towards reducing the numbers of the chafers in open fields. It is, to plant tufts of strawberries or lettuces round the trees to be preserved, for the grub has been found to prefer these roots to others. As soon as the lettuce or strawberry plant begins to wither, it is dug up, and the caterpillars at its root are destroyed. The application of peat, pit-coal, turf-ashes, or lime, forms a fourth method for destroying the larvæ when they rise near to the surface.

Rosier, in his *Course of Agriculture*, gives what appears to be the most efficient of the different methods. It is to employ women and children in a general chase of the perfect insects for several years in succession. This, indeed, seems the mode that would most naturally present itself to any one, desiring to rid himself of these troublesome visitors, because the torpid state of the insect as it clings to trees and shrubs during the day, is very favourable to the task. The flambeau mentioned above may be found an important aid, since numbers of the insects will be lodged on the upper branches of the trees, and out of the reach of those who might be sent out as mere hand-gatherers.

The appearance of cock-chafers in particular districts does not seem to be influenced by those common causes, which have been said to produce a larger or a smaller brood of these insects. Sometimes after a rigorous winter, and a cold, wet spring, which might have been expected to prove fatal to them, they appear in great numbers, and do much mischief; while it has frequently happened that in what seemed a very favourable season, and in which their arrival was expected as a matter of course, they were far less numerous, and the damage they effected was very trifling. An abundant brood of eggs does not ensure a numerous offspring; nor does an apparently small deposition of eggs make it by any means certain that the crops will escape during the succeeding year. Each female chaffer lays nearly a hundred eggs, so that, if only a few of each brood escape the different causes which are likely to effect their destruction a very considerable number of grubs may appear during the following season.

The figures at the head of this notice represent (a) the larvæ when first hatched; (b) the larvæ of the first, (c) of the second, and (d) of the third year; while at e and f is represented the perfect insect in the attitudes of repose and of flight.

WHATE'ER in youth
Seem'd real, ere our middle age arrives,
Even like a phantom vanishes away,
Or crumbles in our grasp.—Our life itself—
Which once appear'd as if 'twould never end—
Is found to be a shadow, soon to flit
Away, and be forgotten;—even the schemes—
The air-built castles of our early days—
That vigorous hope with which we look'd abroad
Into the opening world—that confidence
In the bright-seeming future, by no fear
Of change or chance diminish'd—were in truth,
More tangible possessions in themselves,
Than the realities of later life.

MOULTRIE'S *Dream of Life*

EASY LESSONS IN CHESS.

XIX.

THE MUZIO GAMBIT.

THE Muzio Gambit is a branch of the King's Gambit, in which the first player sacrifices a Knight on the fifth move, in exchange for a strong attacking position. It was long supposed that the attack thus acquired was without defence, and the opinion still prevails that could White castle, as in Italy, by moving his King at once to K. R. square, instead of to K. Kt. square, (as he must do, according to the Chess laws of this country,) the game could not be defended.

This sacrifice of the Knight is probably unsound, but in actual play the defence is so exceedingly difficult, that it may be made without great hazard. The following remarks by Mr. Walker on this opening, are much to the purpose: "The student wishing to excel will, indeed play the Muzio whenever opportunity arises, since hardly any other opening so forcibly exemplifies the power of a few pieces, well combined, over a mass of inert force. You here see the necessity of meeting a strong attack by immediate offers of exchange, and you will find, that one lost time—one weak move—fatally commits the game. Delay is here not only dangerous, but fatal; one slow step is ruin. So strong and enduring is the attack—so fertile and complicated its resources—that the Muzio Gambit may be fairly classed as the most brilliant and critical opening of the game extant."

The earliest mention of this form of Gambit occurs in Salvio's celebrated treatise on Chess, which was published at Naples in 1604. He says that it was first shown to him by Signor Muzio, but that it had previously originated with Don Geronimo Cascio, who discovered it accidentally while engaged in play.

In common with some other forms of Gambit, it depends more upon the second player, than the first, whether the game shall be a Muzio or not. If at the fourth move Black do not advance his K. Kt. P. upon your K. Kt., the game cannot then be resolved into a regular Muzio.

WHITE.

1. K. P. two squares.
2. K. B. P. two squares.
3. K. Kt. to K. B. third square.
4. K. B. to Q. B. fourth square.
5. Castles.

By this move you resolve the game into a Muzio. Black cannot do better than take the Knight.

6. Q. takes P.

You may vary the attack by not taking the Pawn, as will be shown in another game.

You have already acquired a powerful position; your Q. and R. are on the same file; by moving out Q. P., your Q. B. will furnish an additional attack on the Gambit Pawn; while your K. B. already commands the weakest point of your adversary's game. His object must be to defend the Gambit Pawn as long as he can do so with safety, providing in the mean time an efficient support for his K. B. P. He ought also to seek to make equal exchanges, because you having already lost a Knight, every equal exchange must weaken you, while it proportionably strengthens him, that is, provided he can get his pieces into play.

6. Q. to K. B. third square.

He thus defends the Gambit Pawn. You may, it is true, capture it, but Black would then exchange Queens, and immediately acquire a winning position. By this move he also prevents you from playing Q. P. two squares, and threatens to check at Q. fifth square, winning K. B. You may now play K. P. one square, as will be shown in the next game, or

7. Q. B. P. one square.

This prevents him from playing Q. to her fifth, and prepares you for Q. P. two squares, at the next move.

7. K. B. to K. R. third square,

in order to strengthen the defence of the Gambit Pawn.

8. Q. P. two squares.

8. Q. Kt. to Q. B. third square.

His object is to get his Queen's pieces to the King's side, where support is wanted.

9. K. P. one square.

9. Q. to K. Kt. second square.

Not being able to defend the Gambit Pawn, and the K. B. P., he abandons the former.

10. Q. B. takes Gambit P.

10. B. takes B.

11. Q. takes B.

Black now requires an additional support to his K. B. P., therefore

11. K. Kt. to K. R. third square.

12. Q. Kt. to Q. second square.

Before Black has time to get out his pieces, or disturb your advanced pawns, you bring up another piece to the attack, and have both Rooks ready to assist.

13. Q. Kt. to K. fourth square.

12. Q. Kt. to K. second square.

14. Q. to K. Kt. fifth square.

13. Q. Kt. to K. Kt. third square.

By this apparently unimportant move, you maintain your position, prevent the Q. Kt. from being moved, while his Q. can move only to one square, for if she go to K. Kt. square, you play Kt. to K. B. sixth square checking. If he move King to K. B., you mate with Q. at her eighth square. If he Castle, you play Kt. to K. B. sixth square checking; his K. must move to the corner, and you then win Q. by playing Kt. to K. R. fifth square. Therefore he plays

15. Kt. to K. B. sixth sq. chg.

14. Q. P. one square.

He cannot play K. to K. B. without losing his Q.

16. Kt. to K. R. fifth square

15. K. to Q. square.

17. P. takes P.

16. K. B. P. one square.

18. P. advances discovering chk.

17. Q. to K. B. square.

19. Q. to K. B. sixth square.

18. Q. Kt. to K. second square.

By this move you must win the Rook, for his pieces are so confined that he can neither defend nor attack to any advantage.

20. Q. takes R.

19. K. Kt. to K. Kt. fifth square.

21. P. moves to K. B. eighth sq., becoming a Q. checking.

20. Q. takes Q.

22. B. takes Q. checking.

21. Q. takes Q.

22. K. to Q. second square.

Having gained this decided advantage, you will now be able to win the game easily.

1. K. P. two squares.

1. K. P. two squares.

2. K. B. P. two squares.

2. P. takes P.

3. K. Kt. to K. B. third square.

3. K. Kt. P. two squares.

4. K. B. to Q. B. fourth square.

4. K. Kt. P. one square.

5. Castles.

5. P. takes K. Kt.

6. Q. takes P.

6. Q. to K. B. third square.

Thus far the moves are the same as in the last game. You now sacrifice your K. P. in order to expose his K. still more to your attack, and unless he play cautiously he may lose his Q.

7. K. P. one square.

7. Q. takes P.

If he refuse to take this P., you immediately play Q. P. two squares, and have an admirable game. You cannot obviously play K. R. to K. square; therefore in order to guard your K. B. and also to open a path for Q. B., you play

8. Q. P. one square.

8. K. B. to K. R. third square.

9. Q. B. to Q. second square.

This move enables you to play R. to K. square, threatening to win his Q., but in order to be able to remove her he plays

9. K. Kt. to K. second square.

It would not have been good play for Black to have taken your Q. Kt. P., for by doing so his Q. would have been removed from that part of the field where her services are now most wanted.

10. Q. Kt. to Q. B. third square.

10. Q. B. P. one square.

His object is to prevent the further advance of your Q. Kt., as also to play his Q. P. two squares.

11. Q. R. to K. square.

You have now got all your pieces into play with a good position, while his game is greatly confined.

11. Q. to Q. B. fourth square chg.

Being forced to move his Q. he thus gains time, but he also improves your game by placing your K. in a safe position.

12. K. to K. R. square.

13. Q. P. two squares.

This is well played; he cannot take your K. B. without losing his Q., therefore

14. K. B. takes Q. P.

15. Q. to her third square.

Black having thus far preserved the Gambit Pawn, and opened his game by playing Q. P. two squares, your attack is somewhat enfeebled; you therefore offer to make another sacrifice in order to maintain the attack. If Black take the B. you retake with Kt., and with skilful play are almost sure to win. Some good authorities advise Black not to take the B., therefore he

14. Castles.

15. K. B. to Q. Kt. third square.

Black proposes to exchange Queens; if you accede he is likely to retrieve his game.

16. Q. to Q. B. fifth square.

17. K. B. takes Q. B.

17. Q. B. takes Gambit P.

18. K. Kt. to K. B. fourth square.

18. K. R. takes B.

19. K. Kt. to K. Kt. second square.

19. Kt. to K. fourth square.

20. Q. B. takes K. B.

He thus forces you to exchange your K. B., which is always a troublesome piece in the defence of the Gambit.

20. K. B. takes K. Kt.

21. K. to K. B. sixth sq. chg.

He dare not go into the corner on account of his K. R.

22. Q. R. takes Q. B.

This is a clever sacrifice and decides the game.

23. K. B. P. takes R.

23. Kt. to K. R. fifth sq. chg.

24. Q. takes Kt.

24. R. takes R.

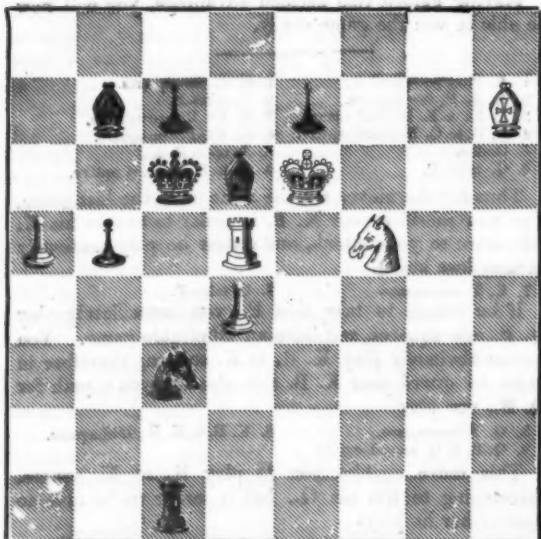
25. K. to K. Kt. second square.

25. R. to K. B. sixth sq. chg.

26. Q. gives checkmate.

PROBLEM XXI.—*White to move first, and to give checkmate on the fourth move.*

BLACK.



WHITE.

Those that will not yield to the fear of God shall be made to yield to the fear of everything else.

It is recorded of a gifted heathen that, being asked the question "What is God?" he requested time, repeatedly doubled, for answering a query which became more difficult the more it was considered.

SANSKRIT HYMN.

SPIRIT of spirits, who, through every part
Of space expanded and of endless time,
Beyond the stretch of labouring thought sublime,
Bad'st uproar into beauteous order start,
Before heaven was, Thou art!
Ere spheres beneath us rolled, or spheres above,
Ere earth in firmamental ether hung,
Thou sat'st alone, till through thy mystic love,
Things unexisting to existence sprung,
And grateful descant sung.
What first impelled Thee to exert Thy might!
Goodness unlimited. What glorious light
Thy power directed! Wisdom without bound.
What proved it first! Oh! guide my fancy right;
Oh! raise from cumbrous ground,
My soul in rapture drown'd,
That fearless it may soar on wings of fire;
For Thou, who only know'st, Thou only canst inspire!
My soul absorbed ONE only Being knows,
Of all perceptions ONE abundant source,
Whence every object, every moment flows:
Suns hence derive their force,
Hence planets learn their course
But suns and fading worlds I view no more,
God only I perceive, God only I adore.
FORBES' Oriental Memoirs.

PRIVATE RESPONSIBILITIES.

EVERYTHING which the real welfare of society requires, but which could not without tyranny be regulated by government, remains a claim on the conscience and honour of individuals. "All the good that my knowledge could do, would be of very little consequence to society." This argument is an absolute palsy to the progress of improvement. It may be quite true, that the knowledge or ignorance of one person signifies little to a great and powerful nation. But by the same mode of reasoning, we might prove that many of the most clear and indisputable moral and religious practices were no duty to society either, whatever they might be to our own consciences. For even the virtue or vice of one individual, might also signify little to the prosperity of the nation; but what would be the consequence if everybody, or if a great many, applied this argument to their own conduct? General vice. Therefore there can be no doubt, that moral and religious conduct is a duty to society as well as to ourselves. Though our guilt might hurt it very little, and our goodness serve it very little, yet it is still a social duty, as well as a private one, to avoid the guilt and practise the virtue, because the consequences of our conduct to society are to be estimated, not merely by the results of our own acts, but by what the results would be, if our own conduct were the general practice. This argument applies as well to the acquisition of useful knowledge, and to the endeavour to mend the ills which pervade society, as to the more direct and sacred obligations of personal virtue. One person may be ignorant, one person may be supine; but if the majority are so, evils will accumulate till the nation decay and sink to ruin.

We may divide society into those who are assisting the progress of civilization, those who are driving it backwards towards barbarism, and those who being inert and stationary are an impediment to the efforts of others. We must choose to which of these classes we will belong, for to one or other it is evident we must belong. If we are vicious, or even ignorant and prejudiced, so in that our intercourse with society we foster old errors, and resist the improvements of the age, we must rank with those who are either impeding the prosperity of the country, or forcing it back to barbarism. But if we think, speak, and act up to the moral lights of our time, assisting more or less to maintain or forward improvement, we have then a right to rank with the first, and number ourselves among the benefactors of mankind. Our positive influence may be greater or less, without either merit or fault of our own, but we have joined the right cause. Each soldier has a share in the honour of the victory.—*Woman's Rights and Duties.*